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# ENBUS 308 - SUSTAINABILITY MANAGEMENT STANDARDS AND AUDITING

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Meetings: Wednesdays, 2:30-5:20 pm, EV1-350

Instructor: Prof. Steven B. Young, 1-519-888-4567 x38419, sb.young@uwaterloo.ca

Office Hours: Tuesdays 1-2:30 pm, EV3-4243

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## CALENDAR DESCRIPTION

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*ENBUS 308 LEC 0.50 Course ID: 012898 Sustainability Management Standards and Auditing*  
Standards and auditing approaches used for sustainability management are examined. Public standards, like those from the International Organization for Standardization, are contrasted with private standards, developed by specific industries for product transparency and accountability in supply-chains. Auditing practice, as defined by the ISO 19011 standard, is examined including principles, steps, reporting and important concepts. Examples of performance standards and management system standards are explored, covering industrial, social and environmental issues. Lectures may be supplemented by required field trip(s) and/or field work.

[Note: Field trip fee: up to \$50+HST]

Prereq: ENBUS 202, 204 or instructor consent

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## COURSE FEE

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There is no fee in 2019. It is required that each student participate in at least one of the industrial tours offered. In 2019 the costs of tours are being paid by SEED.

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## LEARNING OBJECTIVES

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On completion of this course, a student should be able to:

- Perform a basic sustainability audit
- Articulate attributes and structures of management system standards and sustainability performance standards
- Appraise a sustainability audit statement
- Critically assess outcomes and successes of sustainability standards programs
- Articulate alternatives to sustainability auditing

## ASSESSMENTS

Work is assessed individually except for the group quizzes. Assignments are to be submitted to the LEARN dropbox where results will also be returned.

Assessment	Weight	Due date	Description
Quizzes Q1, Q2, Q3	10%	May 22 June 26 July 24	In-class two-stage quizzes using IF-AT cards, about 1-hour in three stages (individual, group, discussion). Each quiz is of equal value, but number of questions may vary. Lowest grade of three will be dropped.
Assignment A1	15%	June 5	Greenhouse gas report. Graded for understanding, numeracy and professional presentation. Submit to LEARN by 11:59 PM on due date.
Assignment A2	10%	June 26	Industry tour report. (Even if you attend multiple trips, only one report is required).
Assignment A3	2% 18%	July 3 July 29	One-page description of your selected program. Report on a sustainability standards program. Analysis of program based on the course framework. Must provide critical analysis and use at least one independent external reference.
Participation P	5%	--	Based on demonstrated engagement in the course.
Midterm M	40%	July 17	Multiple choice, short and long answer questions. In regular class timeslot for 2 hours.

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## SCHEDULE

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### LECTURE 1: MAY-08

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Introductions, course outline, mock audit.

Readings:

- LEED background at <https://www.cagbc.org/leedv4-1>. Review the YouTube video series on LEED v4.1 from the USGBC starting with the [introduction](#) video and followed by the six videos on how points are achieved.

### LECTURE 2: MAY-15

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Overview of standards programs and structure.

Readings before class:

- ISEAL Alliance. Graphical videos from ISEAL Alliance to be viewed online. Videos provide base content on sustainability standards, supported by more in-depth content at <https://www.isealalliance.org/>. Access required videos here: <https://vimeo.com/isealalliance>.
  - Credibility in Claims and Labelling (2013), <https://vimeo.com/54660524> \*\*\*
  - What is a Sustainability Standard? (2013), <https://vimeo.com/54659852>
  - Good Standard-Setting (2013), <https://vimeo.com/54658940>
  - Credible Assurance (2013), <https://vimeo.com/54658557>
- Iñaki Heras-Saizarbitoria, Olivier Boiral and Erlantz Allur (2018). “Three Decades of Dissemination of ISO 9001 and Two of ISO 14001: Looking Back and Ahead”, Chapter 1 in *ISO 9001, ISO 14001, and New Management Standards*. Editors: Inaki Heras-Saizarbitoria. Springer.
  - Accessible at the library through Springer eBooks
- ISO. (2010). International standards and “private standards” Geneva: International Organization for Standardization. February 2010/1 500. ISBN 978-92-67-10518-5.
  - Available on LEARN
- Auld, G., Bernstein, S., & Cashore, B. (2008). The New Corporate Social Responsibility. *Annual Review of Environment and Resources*, 33(1), 413–435. doi:10.1146/annurev.enviro.32.053006.141106

### LECTURE 3: MAY-22

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Greenhouse gas measurement, reporting and verification

Readings before class

- Conroy, M. (2007). Case: Victoria’s Secret and FSC. Excerpted from Conroy, M. (2007). *Branded! How the certification revolution is transforming global corporations*. Gabriola Island: New Society Publishers.
- International Emissions Trading Association (2015). GHG measurement reporting and verification. Information sheet.
  - Available on LEARN
- ISO 14064-1:2018. Greenhouse gases -- Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals. <https://www.iso.org/standard/66453.html> [
  - Read up to and including section 3

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**LECTURE 4: MAY-29**

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**Quiz Q1**

Programs: operation of programs, theory of change, supply-chains.

Practice: Ethics & principles

Readings before class:

- Jason Potts, Matthew Lynch, Ann Wilkings, Gabriel Huppé, Maxine Cunningham, Vivek Voora (2014). *The State of Sustainability Initiatives Review 2014. Standards and the Green Economy*. International Institute for Sustainable Development (IISD) and the International Institute for Environment and Development (IIED). ISBN: 978-1-894784-45-0.
  - Read pages 19-27
- ISEAL Alliance. Graphical videos from ISEAL Alliance to be viewed online.
  - ISEAL: Standards Content (2013), <https://vimeo.com/54682072>
  - ISEAL Credibility Principles (2013), <https://vimeo.com/70405675>
  - Sustainability Standards - What's Inside? (2013), <https://vimeo.com/54771263>
  - Effective Chain-of-Custody and Traceability (2013), <https://vimeo.com/54659735>

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**LECTURE 5: JUN-05**

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Audit practice: ISO 19011, audit steps, basics of auditing programs and practices

Readings before class:

- Chapter 4.3 “Auditing”, in *Environmental Management in Organizations*. (2011) Editors: John Brady, Alison Ebbage and Ruth Lunn. 2nd ed. Earthscan Publisher. ISBN 1849710627
  - Book is available at the library and was used in ENBUS 202.
- ISO 19011-2015. Guidelines for quality and/or environmental management systems auditing. Geneva: International Organisation for Standardisation.
  - This document provides the basic framework for (management system) audit practice.
  - This week read introduction up to and including section 3

**Assignment A1 due at 11:59 pm.**

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**LECTURE 6: JUN-12**

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Industry tour

Region of Waterloo Landfill and Recycling Center

Readings:

- ISO 19011-2015. Guidelines for quality and/or environmental management systems auditing. Geneva: International Organisation for Standardisation.
  - Finish reading this standard

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**LECTURE 7: JUN-19**

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Industry tour

Toyota Plant Tour (1:00-4:00), Cambridge

Readings:

- ISO 19011-2015. Guidelines for quality and/or environmental management systems auditing. Geneva: International Organisation for Standardisation.
  - Finish reading this standard

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**LECTURE 8: JUN-26**

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**Quiz Q2**

Audit practice: Sampling, risk, materiality

**Assignment A2 due at 11:59 pm.**

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**LECTURE 9: JUL-03**

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Audit practice: Assurance, attestation, findings, recommendations, non-compliance, etc.

Readings before class:

- A selected CSR report and corresponding assurance [tbd], provided on LEARN

**Assignment A3 (one-pager) due at 11:59 pm.**

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**LECTURE 10: JUL-10**

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*NOTE: Class this day begins at 3:30 pm.*

Accreditation and conformity

Readings:

- ISO/IEC 17011:2017. Conformity assessment -- Requirements for accreditation bodies accrediting conformity assessment bodies. Available from library or preview here <https://www.iso.org/standard/67198.html> (read up to and including section 3)
- James Sullivan, May 30, 2018. "Accreditation - What Is It & Why Bother?" <https://www.certificationkitbag.com/blog/2014/12/3/accreditation-why-bother>
- James Sullivan, May 8, 2018. "Who Does What? - An Assurance Ecosystem". <https://www.certificationkitbag.com/blog/2018/5/3/an-assurance-ecosystem>

Outcomes of sustainability standards

Readings:

- ISEAL Alliance (2013). Demonstrating Impacts of Sustainability Standards. <https://vimeo.com/54853380>
- ISEAL Alliance (2018). "Voices from the field". Video at <https://vimeo.com/273518160>
- International Trade Center, [The State of Sustainable Markets 2017: Statistics and Emerging Trends](#) (up to page 8).

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**LECTURE 11: JUL-17**

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**MIDTERM EXAMINATION**

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**LECTURE 12: JUL-24**

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**Quiz Q3**

Alternatives to and the future of sustainability auditing

Readings before class:

- Kemp, D., Owen, J. R., & van de Graaff, S. (2012). Corporate social responsibility, mining and "audit culture." *Journal of Cleaner Production*, 24, 1-10. doi:10.1016/j.jclepro.2011.11.002

*NOTE: Schedule subject to change based on guests, tour dates and whims of the Registrar.*

**Assignment A3 (full report) due July 29 at 11:59 pm.**

## COURSE EXPECTATIONS

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- Numeracy skills
  - The course does not “teach” spreadsheets, units, significant digits or basic calculations. You are expected to use a spreadsheet (e.g., Excel or Google) and to know (or learn) units conversions, use of SI units, etc.
- Reports
  - Written assignments are to be submitted via LEARN
  - Word count requirements INCLUDE tables and figures but do not include supporting materials like references and appendices.
  - Readability and Clarity: Students are expected to present professional, well organized and properly written work. Exceptional penalties of up to 25% may be applied in cases where readability or clarity is inadequate.
  - LEARN will permit resubmits up to due time.
  - Originality of your work will be checked using Turn-it-in.
- Lateness penalty
  - Late assignments can be submitted but will be identified by the system as late.
  - Written assignments are due to LEARN on time on the due date. An assignment that is late brings about an immediate 20% penalty. An assignment that is late up to 10 business days shall be assessed a 50% penalty. Assignments later than 10 business days will not be accepted and a grade of zero will be recorded.
- Remarking requests for assignments and tests
  - If you feel a mistake has been made in marking, submit your request for remarking on a cover page attached to a full paper copy of the assignment to the professor, including all assessments and feedback, to his office or his SEED mailbox (EV3 fourth floor). Explain in detail what you feel needs to be addressed.
  - Remarks must be submitted within 1 week of return of the original assignment.
  - The professor will remark the contested work and the mark may increase or decrease.
- Requests for exemptions or compassionate considerations are to be discussed with the professor in advance or as soon as possible.
- Electronic Communications.
  - Electronic communication for the course should be sent through LEARN.
  - The instructor will try to reply to legitimate inquiries from students within three business days. Please ensure that you include a meaningful descriptor of the topic of your email subject, including the course number. Make sure you consult the course outline/syllabus, LEARN and other course materials before submitting inquiries through LEARN. The instructor will not respond to any requests or messages sent via personal email accounts or social media. Queries made near the due dates of assignments or tests may not be answered.
- Devices in-class
  - Laptops, smart phones and tablets are permitted in class for course-related purposes only. Anybody found accessing the internet for other purposes (e.g. checking email, chatting, social media, non-course sites, playing on-line games, etc.), or using laptops off-line for non-course purposes (e.g., games, movies, music), will be asked to leave the class.
  - Devices should be silent in-class.

- Turnitin.com:
  - Text matching software (Turnitin®) may be used to screen assignments in this course. Turnitin® is used to verify that all materials and sources in assignments are documented. Students' submissions are stored on a U.S. server, therefore students must be given an alternative (e.g., scaffolded assignment or annotated bibliography), if they are concerned about their privacy and/or security. Students will be given due notice, in the first week of the term and/or at the time assignment details are provided, about arrangements and alternatives for the use of Turnitin® in this course.
  - See details here: <https://uwaterloo.ca/academic-integrity/guidelines-instructors>
  - It is the responsibility of the student to notify the instructor if they, in the first week of term or at the time assignment details are provided, wish to submit the alternate assignment.

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## UNIVERSITY ACADEMIC POLICIES

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◆ **Intellectual Property:** Students should be aware that this course contains the intellectual property of their instructor, TA, and/or the University of Waterloo. Intellectual property includes items such as:  
-Lecture content, spoken and written (and any audio/video recording thereof);  
-Lecture handouts, presentations, and other materials prepared for the course (e.g., PowerPoint slides);  
-Questions or solution sets from various types of assessments (e.g., assignments, quizzes, tests, final exams); and  
-Work protected by copyright (e.g., any work authored by the instructor or TA or used by the instructor or TA with permission of the copyright owner).

Course materials and the intellectual property contained therein, are used to enhance a student's educational experience. However, sharing this intellectual property without the intellectual property owner's permission is a violation of intellectual property rights. For this reason, it is necessary to ask the instructor, TA and/or the University of Waterloo for permission before uploading and sharing the intellectual property of others online (e.g., to an online repository).

Permission from an instructor, TA or the University is also necessary before sharing the intellectual property of others from completed courses with students taking the same/similar courses in subsequent terms/years. In many cases, instructors might be happy to allow distribution of certain materials. However, doing so without expressed permission is considered a violation of intellectual property rights.

Please alert the instructor if you become aware of intellectual property belonging to others (past or present) circulating, either through the student body or online. The intellectual property rights owner deserves to know (and may have already given their consent).

◆ **Academic Integrity:** In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. The University's guiding principles on academic integrity can be found here: <http://uwaterloo.ca/academicintegrity>. ENV students are strongly encouraged to review the material provided by the university's Academic Integrity office specifically for students: <http://uwaterloo.ca/academicintegrity/Students/index.html>

Students are also expected to know what constitutes academic integrity, to avoid committing academic offenses, and to take responsibility for their actions. Students who are unsure whether an action constitutes an offense, or who need help in learning how to avoid offenses (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. Students may also complete the following tutorial: <https://uwaterloo.ca/library/get-assignment-and-research-help/academic-integrity/academic-integrity-tutorial>

When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline: <https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-71>. Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy #70, Student Grievance:

<https://uwaterloo.ca/secretariat-general-counsel/policies-procedures-guidelines/policy-70>

- ◆ **Note for students with disabilities:** AccessAbility Services, located in Needles Hall, Room 1401, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic 5 accommodations to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term.
- ◆ **Mental Health:** The University of Waterloo, the Faculty of Environment and our Departments/Schools consider students' well-being to be extremely important. We recognize that throughout the term students may face health challenges - physical and / or emotional. **Please note that help is available.** Mental health is a serious issue for everyone and can affect your ability to do your best work. Counselling Services <http://www.uwaterloo.ca/counselling-services> is an inclusive, non-judgmental, and confidential space for anyone to seek support. They offer confidential counselling for a variety of areas including anxiety, stress management, depression, grief, substance use, sexuality, relationship issues, and much more.
- ◆ **Religious Observances:** Students need to inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.
- ◆ **Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. See Policy 70 - Student Petitions and Grievances, Section 4, [www.adm.uwaterloo.ca/infosec/Policies/policy70.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm). When in doubt please contact your Undergraduate Advisor for details.
- ◆ **Appeals:** A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 – (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) [www.adm.uwaterloo.ca/infosec/Policies/policy72.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm)
- ◆ **Unclaimed assignments:** Unclaimed assignments will be retained for one year. After that time, they will be destroyed in compliance with UW's [confidential shredding procedures](#).
- ◆ **Communications with Instructor and Teaching Assistants:** All communication with students must be through either the student's University of Waterloo email account or via Learn. If a student emails the instructor or TA from a personal account they will be requested to resend the email using their personal University of Waterloo email account.
- ◆ **Research Ethics:** The University of Waterloo requires all research conducted by its students, staff, and faculty which involves humans as participants to undergo prior ethics review and clearance through the Director, Office of Human Research and Animal Care (Office). The ethics review and clearance processes are intended to ensure that projects comply with the Office's Guidelines for Research with Human 6 Participants (Guidelines) as well as those of provincial and federal agencies, and that the safety, rights and welfare of participants are adequately protected. The Guidelines inform researchers about ethical issues and procedures which are of concern when conducting research with humans (e.g. confidentiality, risks and benefits, informed consent process, etc.). If the development of your research proposal consists of research that involves humans as participants, the please contact the course instructor for guidance and see <https://uwaterloo.ca/research/office-research-ethics>
- ◆ **Recording lectures:** Use of recording devices during lectures is only allowed with explicit permission of the instructor of the course.
  - If allowed, video recordings may only include images of the instructor and not fellow classmates.
  - Posting of videos or links to the video to any website, including but not limited to social media sites such as: facebook, twitter, etc., is strictly prohibited
- ◆ **Co-op interviews and class attendance:** Co-op students are encouraged to try and choose interview time slots that result in the least amount of disruption to class schedules. When this is challenging, or not possible, a student may miss a portion of a class meeting for an interview. Instructors are asked for leniency in these situations; but, a co-op interview does not relieve the student of any requirements associated with that class meeting. When a co-op interview conflicts with an in-class evaluation mechanism (e.g., test, quiz, presentation, critique), class attendance takes precedence and the onus is on the student to reschedule the interview. CECA provides an interview conflict procedure to manage these situations. Students will be required to provide copies of their interview schedules (they may be printed from WaterlooWorks) should there be a need to verify class absence due to co-op interviews.